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10/527,862	03/16/2005	Nicholas Michael Ian Noble	NL 020928	9313

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EXAMINER	
RASHID, DAVID	

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2624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/527,862	NOBLE ET AL.	
	Examiner	Art Unit	
	David P. Rashid	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 March 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/9/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

All of the examiner's suggestions presented herein below have been assumed for examination purposes, unless otherwise noted.

Amendments

1. This office action is responsive to the preliminary claim amendment received on 3/16/2005.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d) (Application # 02078922.8, filed 3/16/2005), which papers have been placed of record in the file.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show subject matter as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).

(i) It is suggested to enter in what each box disclosed in FIG. 1 represents (e.g. box element 2 – "segmentation"; box element 3 – "segmented image"; and so forth).

(ii) FIG. 1 contains the box "Image i" but the specification supports that box containing "Image 1" – it is suggested to change to "Image 1"

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference characters not mentioned in the description: "A" and "B" in FIG. 2.

5. The following is a quote from 37 CFR 1.84(p)(3):

> When necessary, such as indicating a surface or cross section, a reference character may be underlined and a blank space may be left in the hatching or shading where the character occurs so that is appears distinct.

6. FIG. 2 is objected to under 37 CFR 1.84(p)(3) for failing to properly use underlining – it is suggested to remove the underlining from "A" and "B" in the left sub-view, and also to move "B" closer to the end of its arrow (or move the arrow's end closer to B).

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign mentioned in the description: "image 1".

8. The following is a quote from 37 C.F.R. 1.84(u)(1):

> (3) Sectional views . The plane upon which a sectional view is taken should be indicated on the view from which the section is cut by a broken line. The ends of the broken line should be designated by Arabic or Roman numerals corresponding to the view number of the sectional view, and should have arrows to indicate the direction of sight.

9. FIG. 2 is only suggested under 37 C.F.R. 1.84(u)(1) to properly create a sectional view. The right partial view (FIG. 2B) is a "sectional view" of the left partial view (FIG. 2A). The arrow connecting the two partial views should be removed, and FIG. 2A should contain a broken line slicing the area of the partial view having arrows to indicate the direction, with a reference character"2B" attached to indicate the sectional view FIG. 2B.

10. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the

renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

11. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

12. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without

underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
(1) Field of the Invention.
(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

13. The disclosure is objected to because of the following informalities:

(i) Page 5, line 6 contains a smeared word that may be "defined", suggest correcting.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

14. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

> Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.
>
> When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).
>
> In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

15. **Claims 7 – 10** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. **Claims 7 – 10** define "[s]oftware for an apparatus" embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed "[s]oftware for an apparatus" can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" or equivalent in order to make the claim statutory (such as "[a] computer-

readable medium storing software such that when executed...". Any amendment to the claim should be commensurate with its corresponding disclosure.

Claim Rejections - 35 USC § 112

16. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

17. **Claims 1 – 16** are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for patient's organs, does not reasonably provide enablement for other body parts such as a ribosome, white blood cell, neuron, or plasmid. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to enable the invention commensurate in scope with these claims. It is acknowledged that a patient's organ is a group of tissue that perform a specific function, and the invention does enable for such a large conglomeration of tissue such as an organ. However, other body parts, such as a ribosome are small enough that the disclosed invention is not enabling. It is suggested to remove "or other body part" from the independent claims.

Claim Objections

18. **Claim 1 – 16** are objected to because of the following informalities:

(i) Claim 1, line 9 cites "substantially all images" but it is unclear how many images of the series of images are subjected to such a transformation, all of them?, half of them? –

it is suggested to remove "substantially" to make the question definite. Claims 7 and 11 have the same equivalent argument.

(ii) Claim 4, line 3 contains acronyms that should first be spelled out completely before placing the acronym in parentheses (e.g. "magnetic resonance (MR)") – it is suggested to do so for all four acronyms. Claim 14 has the same equivalent argument.

(iii) Claim 6, line 2 cites "substantially sphere-like organ" but it is unclear how sphere-like the organ is, is a cube "substantially sphere-like"?, it is already clear that "sphere-like" includes all organs of a sphere-like shape (such as a heart) it is suggested to remove "substantially" to make the question more definite. Claims 10 and 16 have the same equivalent argument.

(iv) Claim 6, line 7 cites "substantially correspond" but it is unclear the degree of the plane corresponding to the inside and outside of the organ – it is suggested to remove "substantially" to make the question definite. Claims 10 and 16 have the same equivalent argument.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

19. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

20. **Claim 1** is rejected under 35 U.S.C. 102(b) as being anticipated by Malassiotis et al. (Tracking the Left Ventricle in Echocardiographic Images by Learning Heart Dynamics, IEEE Transactions on Medical Imaging, Vol. 18, No. 3, 3/1999, pp. 282 – 290).

Regarding **claim 1**, Malassiotis discloses an apparatus having means for segmenting a series of 2D (p. 287) or 3D images obtained of a patient's organ ("heart ventricle" in section I, left column, p. 282) or other body part, wherein a first segmentation is carried out on a first image of the series of images ("...first frame of the sequence." in section I, left column, p. 283) and wherein the first segmentation is used for the subsequent segmentation of the remainder of images of said series of images ("...this basis is used to constrain the motion of the active contour in subsequent frames..." in section I., left column, p. 283), characterized in that in relation to the images

said means carry out a series of transformations (FIG. 2, right column, p. 284; FIG. 3, p. 285 wherein the transformation switching from the old set to the new set of snake points using contour tracking)

wherein each separate transformation embodies a fitting operation ("minimum energy solution" in right column, p. 284; section "B. Explicitly Constraining Snake Energy" on p. 286) between two images of said series of images, and

wherein substantially all images (FIG. 4 on pg. 286 for all 90 frames) of the series of images are subjected to such a transformation, and

wherein the first segmentation on the first image of the series of images ("...an initial approximation of the object boundary at the first frame of the sequence.", in section I, left column, p. 283) is modified and subsequently applied to any further image of the series of images according to the transformation or sequence of transformations that fits the said first image to said further image of the series of images ("...this basis is used to constrain the motion of the active contour in subsequent frames..." in section I, left column, p. 283 wherein all further frames in the sequence are ultimately transformed based on the initial fit of the first frame's boundary (since frame N depended from frame N – 1,...,frame 3 depended from frame 2, frame 2 depended from frame 1)).

Regarding **claim 2**, Malassiotis discloses an apparatus according to claim 1, characterized in that each transformation relates to adjacent or immediately successive images of the series of images (it is suggested by FIG. 4 that every frame in the sequence undergoes contour tracking transformation; "[t]he boundary obtained at a specific time instance was simply used as an initial value at the subsequent time instance" on p. 288).

Regarding **claim 3**, Malassiotis discloses an apparatus according to claim 1, characterized in that there are two or more series of images ("several sequences" in section V, right column, p. 286) and that the segmentation of a first series of images is applied to all series of images (the segmentation of initial boundary estimation of the first sequence was used for all other sequences as well; a heart beat loop can also constitute a "sequence" where segmentation of the other sequences are directly segmented based on of the first sequence).

Regarding **claim 5**, Malassiotis discloses an apparatus according to claim 3, characterized in that the respective series of images are collected at different times (Section V suggests one

scanner (the "ATL HDI5000 CV scanner") is used to test the several sequences of B-mode echocardiograms, thus they must have been performed at different times; the heart beat loop sequence also must be performed at different times).

Regarding **claim 7**, claim 1 recites identical features as in the software for an apparatus (it is inherent that the Malassiotis is on a computer, and thus using software to perform the algorithm) of claim 7. Thus, references/arguments equivalent to those presented above for claim 1 are equally applicable to claim 7.

Regarding **claim 8**, claim 2 recites identical features as in claim 8. Thus, references/arguments equivalent to those presented above for claim 2 are equally applicable to claim 8.

Regarding **claim 9**, claim 3 recites identical features as in claim 9. Thus, references/arguments equivalent to those presented above for claim 3 are equally applicable to claim 9.

Regarding **claim 11**, claim 1 recites identical features as in claim 11. Thus, references/arguments equivalent to those presented above for claim 1 are equally applicable to claim 11.

Regarding **claim 12**, claim 2 recites identical features as in claim 12. Thus, references/arguments equivalent to those presented above for claim 2 are equally applicable to claim 12.

Regarding **claim 13**, claim 3 recites identical features as in claim 13. Thus, references/arguments equivalent to those presented above for claim 3 are equally applicable to claim 13.

Regarding **claim 15**, claim 5 recites identical features as in claim 15. Thus, references/arguments equivalent to those presented above for claim 5 are equally applicable to claim 15.

Claim Rejections - 35 USC § 103

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

22. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Malassiotis et al. (Tracking the Left Ventricle in Echocardiographic Images by Learning Heart Dynamics, IEEE Transactions on Medical Imaging, Vol. 18, No. 3, 3/1999, pp. 282 – 290) in view of Qian (US 5,381,791 A).

Regarding **claim 4**, while Malassiotis discloses an apparatus according to claim 4, characterized in that the respective series of images are collected with ultrasound (US) means (p. 287) , Malassiotis does not teach being characterized in that the respective series of images collected with different means of monitoring selected from the group magnetic resonance (MR), computed tomography (CT), and nuclear medicine (NM.

Qian teaches automatic identification of anatomical features of interest that includes being characterized in that the respective series of images collected with different means of monitoring selected from the group magnetic resonance (MR), computed tomography (CT), and nuclear medicine (NM) (Col. 1, lines 10 – 29).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the apparatus of Malassiotis to include being characterized in that the respective series of images collected with different means of monitoring selected from the group magnetic resonance (MR), computed tomography (CT), and nuclear medicine (NM), and ultrasound (US) as taught by Qian as CT and MR "produce clearly defined images", Qian, Col. 1, line 16 – 17 and NM "to provide method and apparatus which can automatically identify anatomic landmarks in nuclear medicine images, even when the images contain insufficient data to be diagnostically useful.", Qian, Col. 2, lines 7 – 11.

Regarding **claim 14**, claim 4 recites identical features as in claim 14. Thus, references/arguments equivalent to those presented above for claim 4 are equally applicable to claim 14.

23. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over Malassiotis et al. (Tracking the Left Ventricle in Echocardiographic Images by Learning Heart Dynamics, IEEE Transactions on Medical Imaging, Vol. 18, No. 3, 3/1999, pp. 282 – 290) in view of Sheehan et al. (US 5,435,310 A).

Regarding **claim 6**, while Malassiotis discloses apparatus according to claim 1, wherein the images relate to a substantially sphere-like organ such as a heart, Malassiotis does not disclose being characterized in that prior to establishing the said series of transformations, the series of images are converted to a modified series of images showing the walls of the organ in a flat plane wherein the left and right part of said plane substantially correspond to the inside and

outside of said organ, and that the said series of transformations are applied to the modified series of images.

Sheehan discloses determining cardiac wall thickness and motion by imaging and three-dimensional modeling that teaches a series of images (FIG. 2A, element 54) are converted to a modified series of images (FIG. 2B; FIG. 3; FIG. 4) showing the walls of the organ in a flat plane wherein the left and right part of said plane substantially correspond to the inside and outside of said organ (FIG. 2B; FIG. 3; FIG. 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the series of images of Malassiotis to be the modified series of images showing the walls of the organ in a flat plane wherein the left and right part of said plane substantially correspond to the inside and outside of said organ as taught by Sheehan to create "a method for imaging and modeling a heart in three-dimensions, and more specifically, to a method for using a three-dimensional model of the heart to determine cardiac parameters.", Sheehan, Col. 1, lines 7 – 10 and "for analyzing cardiac parameters of a patient's heart begins with the step of imaging the heart to produce imaging data.", Sheehan, Col. 2, lines 59 – 61. Consequently, the modified series of images of Malassiotis as taught by Sheehan would then undergo the said series of transformations as taught by Malassiotis, and that the series of image as taught by Sheehand would thus be prior to establishing the series of transformations.

Regarding **claim 10**, claim 6 recites identical features as in claim 10. Thus, references/arguments equivalent to those presented above for claim 6 are equally applicable to claim 10.

Regarding **claim 16**, claim 6 recites identical features as in claim 16. Thus, references/arguments equivalent to those presented above for claim 6 are equally applicable to claim 16.

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 4953554 A; US 5381791 A; US 5435310 A; US 5680862 A; US 5757953 A; US 5800355 A; US 6120453 A; US 20020072670 A1.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David P. Rashid whose telephone number is (571) 270-1578. The examiner can normally be reached Monday - Friday 8:30 - 17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on (571) 272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David P. Rashid/
Examiner, Art Unit 2624

David P Rashid
Examiner
Art Unit 2624

VIKKRAM BALI
PRIMARY EXAMINER